

Fact Sheet



For Final Significant Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Significant Modification, and shall be considered a supplement to the original Fact Sheet corresponding with the issuance of the initial Title V operating permit issued on October 23, 2007.

Permit Number: **R30-07300003-2007; SM01**

Plant Identification Number: **07300003**

Permittee: **CYTEC Industries Inc.**

Facility Name: **Willow Island Plant**

Manufacturing Unit: **Urethanes (Part 1 of 4)**

Mailing Address: **#1 Heilman Avenue, Willow Island, WV 26134**

*Permit Action Number: **SM01** Revised: January 26, 2009*

Physical Location:	Willow Island, Pleasants County, West Virginia
UTM Coordinates:	474 km Easting • 4,356 km Northing • Zone 17
Directions:	Facility is located on State Route 2, two miles south of Belmont, WV, Pleasants County.

Facility Description

CYTEC Industries Inc. is a global, research-based specialty chemical company that is covered by NAICS 325998 and SIC 2899. The company operates a multi-product, multi-process chemical plant at Willow Island, WV. Plant operations are divided into the following three manufacturing units and one support services unit: Urethanes (Part 1 of 4), Surfactants (Part 2 of 4), Site Services (Part 3 of 4) and Polymer Additives (Part 4 of 4).

The Urethanes unit (Part 1 of 4) manufactures aliphatic isocyanates for use in industrial coatings, adhesives, textiles and elastomers. The automotive industry is a major user of these products.

R30-07300003-2007 (Part 1 of 4) is being modified to incorporate the requirements resulting from the promulgation of 40 C.F.R. Part 63, Subpart FFFF – NESHAPs for Miscellaneous Organic Chemical Manufacturing.

Emissions Summary

There are no increased emissions resulting from this significant modification.

Title V Program Applicability Basis

With the proposed changes associated with this significant modification, this facility maintains the potential to emit over 100 tons per year of criteria pollutants (VOC), over 10 tons per year of a single hazardous air pollutant (HAP), and over 25 tons per year of aggregate hazardous air pollutants (HAPs). Due to this facility's potential to emit over 100 tons per year of criteria pollutants (VOC), over 10 tons per year of a single hazardous air pollutant (HAP), and over 25 tons per year of aggregate hazardous air pollutants (HAPs), CYTEC Industries Inc. is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR30	Operating permit requirement.
	40 C.F.R. Part 63, Subpart FFFF	Miscellaneous Organic Chemical Manufacturing

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR15, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-2473G	February 6, 2008	N/A

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

40 CFR 63 Subpart FFFF - MON MACT –

In the October 3, 2008 Notice of Compliance Status Report (NOCS) submitted by Cytec, the permittee identified the following MON MACT miscellaneous chemical processing units (MCPU) within the Urethanes manufacturing unit:

- MCPU 14 - TMXDI unit
- MCPU 15 - Methyl Carbamate [MeC] unit
- MCPU 16 - Methanol Recovery unit
- MCPU 18 - Dimethyl Formamide (DMF) Recovery unit

The following discussion identifies the key applicable MON requirements by regulated emission source category, identifies each Urethanes MCPU that contains the MON applicable requirements, and provides the method of compliance demonstration.

Heat Exchangers:

Heat exchange systems are subject to evaluation under the MON MACT only if they are cooling water systems. Generally, recirculating and once-through systems are exempt if fluid on the process side contains less than 5% OHAP, listed in Table 4 of 40 CFR Part 63 Subpart F, or the pressure differential (cooling side minus process side) is greater than 5.1 psia. In the NOCS submitted by Cytec, the permittee identified heat exchangers subject to the MON MACT within MCPU 15 (MeC unit) and MCPU 16 (Methanol Recovery). Monitoring, recordkeeping, and reporting shall be performed in accordance with the MON MACT, listed as Sections 4.2.2., 4.4.10., and 4.5.2. of the permit.

Continuous Process Vents:

Continuous process vents from each MCPU are to be evaluated to see if each vent can be excluded from the definition of continuous process vents by containing less than 50 ppmw HAP. If it is not exempt, a TRE is calculated for continuous process vents to assess whether or not compliance with the standards is required (vents with a TRE less than 1.9 are Group 1 and will need to meet the standards). In the NOCS submitted by Cytec, the permittee identified only one Group 1 continuous process vent within the Urethanes manufacturing unit, which is located within MCPU 15 (MeC unit). Monitoring, recordkeeping, and reporting shall be performed in accordance with the MON MACT, listed as Sections 4.2.2., 4.4.10., and 4.5.2. of the permit.

Storage Tanks:

A storage tank stores liquids that contain organic HAP and/or hydrogen halide and halogen HAP and is assigned to an MCPU. Storage tanks subject to the MON must contain HAPs, those with no HAPs or HAPs as impurities only are exempt from the standard. A Group 1 storage tank has a volume greater than 10,000 gallons and a maximum true vapor pressure of HAP greater than 1.0 psia. In the NOCS submitted by Cytec, the permittee identified only one Group 1 storage tank within the Urethanes manufacturing unit, which is located within MCPU 15 (MeC unit). Monitoring, recordkeeping, and reporting shall be performed in accordance with the MON MACT, listed as Sections 4.2.2., 4.4.10., and 4.5.2. of the permit.

Wastewater Streams:

A MON MACT wastewater stream is water discarded through a single point of determination (POD) that contains at least 5 ppmw of MON compounds listed in Table 8 (partially soluble HAP) and/or Table 9 (soluble HAP) of 40 CFR Part 63 Subpart FFFF. In the NOCS submitted by Cytec, the permittee identified only two Group 1 wastewater streams within the Urethanes manufacturing unit, one within MCPU 14 (TMXDI unit) and one within MCPU 15 (MeC unit). Monitoring, recordkeeping, and reporting shall be performed in accordance with the MON MACT, listed as Sections 4.2.2., 4.4.10., and 4.5.2. of the permit.

Equipment Leak Detection and Repair (LDAR) Program:

The MON MACT provides equipment leak standards for existing MON MACT process unit equipment in organic HAP (OHAP) service. The MON MACT equipment leak standards are found in Section 40 CFR § 63.2480. More specifically, this section references Table 6 of 40 CFR Part 63 Subpart FFFF, which refers the reader to 40 CFR Part 63 Subparts H (National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks) and UU (National Emissions Standards for Equipment Leaks, Control Level 2), and 40 CFR Part 65 Subpart F (Consolidated Federal Air Rule (CAR) Equipment Leaks Provisions). These subparts list the specific applicable requirements for equipment leak standards. Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in OHAP service. In OHAP service means that the equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight total OHAP as determined using EPA Method 21. In the NOCS submitted by Cytec, the permittee identified the scope of MON MACT LDAR program applicability within the Urethanes manufacturing unit. Monitoring, recordkeeping, and reporting shall be performed in accordance with the MON MACT, listed as Sections 4.2.2., 4.4.10., and 4.5.2. of the permit.

The following discussion identifies the insignificant applicable MON requirements by regulated emission source category, identifies each Urethanes MCPU that contains the MON applicable requirements, and provides the method of compliance demonstration.

Batch Vents:

The batch vents are Group 2 if the total batch process vent emissions from the MCPU are <10,000 lbs/yr. In the NOCS submitted by Cytec, the permittee identified only Group 2 batch vents within the Urethanes manufacturing unit, within MCPU 14 (TMXDI unit) and MCPU 15 (MeC unit). Monitoring, recordkeeping, and reporting shall be performed in accordance with the MON MACT, listed as Sections 4.2.2., 4.4.10., and 4.5.2. of the permit.

Surge Control Vessel and Bottom Receivers:

The MON MACT defines surge control vessels in 40 CFR § 63.2550(i) and they must meet the requirements of 40 CFR § 63.2450(r). 40 CFR § 63.2450(r) states that if the tanks meet the criteria for Group 1 storage tank (>10,000 gallons capacity and >1.0 psi HAP), then the standards provided in Table 4 of the MON MACT must be met (95% control). In the NOCS submitted by Cytec, the permittee identified only one Group 2 surge control vessel within the Urethanes manufacturing unit, within MCPU 14 (TMXDI unit). Monitoring, recordkeeping, and reporting shall be performed in accordance with the MON MACT, listed as Sections 4.2.2., 4.4.10., and 4.5.2. of the permit.

Transfer Racks:

To be considered a transfer rack for the MON MACT, the loading rack must be used to fill tank trucks and/or rail cars with organic liquids that contain one or more OHAP. To be a Group 1 transfer rack, it must load greater than 0.17 million gallons per year of organic liquids with an OHAP rack-weighted partial pressure > 1.5 psia. In the NOCS submitted by Cytec, the permittee identified Group 2 transfer racks within the Urethanes manufacturing unit, within MCPU 14 (TMXDI unit), MCPU 15 (MeC unit), MCPU 16 (Methanol Recovery unit) and MCPU 18 (DMF Recovery unit). Monitoring, recordkeeping, and reporting shall be performed in accordance with the MON MACT, listed as Sections 4.2.2., 4.4.10., and 4.5.2. of the permit.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the Urethanes manufacturing unit due to the following:

40 CFR 63 Subpart FFFF - MON MACT

Hydrogen Halide and Halogen HAP emissions:

According to the NOCS submitted by Cytec, there are no MON MACT regulated Hydrogen Halide and Halogen HAP emissions from the Urethanes manufacturing unit.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: December 10, 2008
Ending Date: January 9, 2009

All written comments should be addressed to the following individual and office:

Bobbie Scroggie
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Bobbie Scroggie
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1225 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

Not Applicable.